

ABB refinery-wide systems help Petrobras grow

2009-02-02 - ABB is providing process automation and power management systems for 10 of Petrobras's 12 refineries in Brazil – solutions that will help increase production by a massive 40 percent and produce new low-emission fuels from renewable sources of energy.

By [ABB Communications](#)

The solutions are part of a modernization program to boost production capacity at Petrobras refineries in Brazil by as much as 40 percent and produce new high-quality, low-sulfur fuels and biofuels to meet growing global and domestic demand for cleaner forms of energy.

ABB's System 800xA is the leading automation platform for many process industries.

By integrating process, electrical and safety systems, it is uniquely equipped to take on large-scale, plant-wide projects.

The scale of the modernization program is immense. In addition to building new units for distillation, hydrotreatment, cooking, desulfurization and other processes, Petrobras is constructing 50 new substations and modernizing about 40 others to the new IEC 61850 global standard for interoperable substation automation devices.

ABB process automation and power management systems are already installed at six of the 12 refineries and power management systems at an additional four refineries.

Over the next five years ABB will upgrade and expand the systems to incorporate the new and revamped production units and IEC 61850 substations.

The 10 refineries have a combined refining capacity of about 1.6 million barrels a day, equivalent to almost 80 percent of Petrobras's total refining capacity.

Integrated process and electrical systems

ABB's award-winning automation platform, System 800xA, is uniquely equipped for such large-scale plant-wide projects.

In addition to being the leading automation platform for a wide range of process industries, it has the unique capability to integrate the process, electrical and safety systems into a single system.

This, among other things, enables refinery operators to monitor and control the systems from a single interface and run power management applications and intelligent IEC 61850 substations in the process automation system.

The operational and cost benefits of such an integrated system are huge, including optimization of all automation and electrical assets, simplified engineering, streamlined maintenance, improved energy efficiency, and lower initial investment costs compared to running non-integrated systems.

High-speed load shedding

One of the most important benefits of ABB's power management system is the high-speed load shedding function, which ensures that the consequences of a fault in the site's electrical system do not impact production or escalate into a plant shutdown.

PMS is installed in upstream and downstream sites all over the world on behalf of customers like BP, ConocoPhillips, ExxonMobil, Petronas and Shell.

Did you know? A landmark ABB automation project is transforming Asia's largest Oil and Gas company...

ABB is nearing completion of one of the largest oil and gas automation projects ever – an supervisory control and data acquisition system (SCADA) that allows Asia's largest oil and gas company, ONGC, to monitor and manage its vast onshore and offshore assets by simply logging into a laptop. [Read more.](#)



The REDUC refinery near Rio de Janeiro, one of six Petrobras refineries equipped with both an ABB process automation and power management system. Four of Petrobras's other refineries in Brazil are equipped with an ABB power management system. ABB is upgrading and expanding the systems at all ten refineries.

Contact us

Page information:

→ [Antonio Carvalho](#)

Contact us

General information:

[Contact ABB](#)

Links

- [ABB Refining portal](#)
- [ABB Process Automation systems](#)
- [Process and electrical integration \(ABB press release\)](#)



Related articles from the ABB Review

[Integrated electrical and automation systems at StatoilHydro Snøhvit](#)

→ [Advances in integrated and safety control](#)

